



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

NEW WESTERN FUNGI.

By J. B. ELLIS AND B. T. GALLOWAY.

PHOMA THERMOPSIDIS, *n. s.* On dead stems of *Thermopsis rhombifolia*. Helena, Mont. Summer of 1888, F. D. Kelsey, Com. F. W. Anderson, No. 413. Perithecia gregarious, subcuticular raising and rupturing the epidermis, but hardly erumpent, subhemispheric with papilliform ostiolum. Sporules oblong-hyaline 2-nucleate, not curved, 15–20 by 5–6 μ .

PHLEOSPORA OXYTROPIDIS, *n. s.* On *Oxytropis Lamberti*. Great Falls, Montana, June, 1888. F. W. Anderson, No. 258. Perithecia amphigenous, innate-erumpent, about 200 μ in diameter, scattered, black. Sporules cylindrical or ovoid, 40–50 by 3½–4½ μ , hyaline, straight, obtuse, nucleate, issuing in a whitish mass.

PESTALOZZIELLA ANDERSONI, *n. s.* On living leaves of *Asclepias* or *Apocynum*. Sand Coulee, Mont. September, 1888. F. W. Anderson, No. 289, Acervuli amphigenous, thickly scattered over the leaf, black, erumpent, discoid, 150–200 μ in diameter. Sporules ovate-elliptical, subacute, hyaline, continuous, 15–22 by 7–10 μ , with an irregularly branched hyaline, 3–4-parted crest of spreading bristles or hairs 12–15 μ long, much as in *Pestalozziella subsessilis*, S. & E. The basidia also are obscure or wanting, as in that species. The affected leaves turn yellow and then brown.

DICOCCUM LATHYRUM, *n. s.* On living leaves of *Lathyrus ochroleucus*, Highwood Cañon, in the Highwood Mountains, Montana, Leg. R. S. Williamson, Com. F. W. Anderson, No. 301. Conidia oblong, 1-septate, slightly constricted, straight, olivaceous, granular, 20–22 by 7–8 μ , forming small, subconfluent, chestnut-colored, velutinous patches on the under side of the leaves (2–3^{mm} in extent), limited by the veinlets, not on any definite spot, but causing the leaf to turn slightly yellowish above. There is no appreciable mycelium, at least on the surface of the leaf.

PEZIZA YOGOENSIS, *n. s.* On dead leaves of *Carex*. Yogo, in the Belt Mountains, Montana, July, Leg. 1888, R. S. Williamson, Com. F. W. Anderson, No. 317. Erumpent of fibrous texture, 200 μ in diameter, margin fimbriate and incurved, substance of the perithecia olivaceous. Disk pale, asci oblong, 55–60 by 15–18 μ , sessile, paraphyses stout, about equal to the asci; not abundant. Sporidia oblique or biseriate, oblong, 2-nucleate, hyaline, rounded at the ends and a little narrower at one end, not curved, 13–15 by 4–5 μ .

On the same leaves is a *Sphaarella*, with gregarious perithecia, oblong, inequilateral, 35 by 12 μ , sessile asci, and crowded biseriate, oblong 12–15 by 3½–4 μ , sporidia. Very near *S. Wichuriana*, Schr et.

EPICOCCUM RUBRIPES, *n. s.* On dead herbaceous stems, Montana. Anderson, No. 290. Sporodochia gregarious, hemispheric, black, ¼–½^{mm}

in diameter, covered above with a layer of obovate, subolivaceous, roughish, substipitate conidia, $7-15\mu$ in diameter, substance of the inner and lower part of the sporodochia rose-red.

The general appearance is that of some erumpent *Sphaeria*.

SPHÆRELLA AQUILEGIÆ, *n. s.* On *Aquilegia Jonesii*, Yogo, in the Belt Mountains, Helena, Montana. July, 1888, Leg. R. S. Williamson, Com. F. W. Anderson, No. 299.

Perithecia scattered on the leaves and petioles, erumpent, rather acutely hemispherical, black, $100-120\mu$ in diameter, pierced above, and more or less distinctly fringed at base with brown creeping threads, texture coarsely cellular. Asci obovate-oblong, sessile, $50-60$ by $22-25\mu$, inequilateral, without paraphyses. Sporidia crowded-biseriate, subclavate-oblong, hyaline, straight, obtuse, slightly constricted, $20-22$ by $9-11\mu$, each cell 1-3-nucleate. Differs from *S. pachyasca*, Ros-trop, which is also found in Montana on *Phlox caespitosa*, principally in its broader sporidia. Perhaps this might be considered a form of that species.

PLEOSPORA LAXA, *n. s.* On dead leaves and culms of some grasses. Montana, Anderson, No. 348. Perithecia scattered, subglobose, black $150-170\mu$ in diameter, their bases projecting on one side of the lamina of the leaf and their apices on the other. Asci few (6-8), in a perithecium, inflated-oblong, broadly rounded above, and contracted at the base into a short stipe, $150-200$ by $35-55\mu$. Paraphyses obscure. Sporidia 8, in an ascus, obovate, oblong, 6-8-septate, coarsely muriform, deeply constricted near the middle, so as easily to break in two at the constriction, straw-yellow, $35-45$ by $15-20\mu$ (mostly 15μ wide). This seems to differ from any of the other described species on grasses or *Carices* in its strongly constricted spores. This character is very distinct through all stages of growth.

The constriction is generally at the third septum from the upper end of the spore, the part above this constriction being broader and shorter (often nearly globose) than the part below it. This comes near *P. Islandica*, Johans, but differs in its more obtuse and deeply constricted sporidia.

LEPTOSPHÆRIA SPOROBOLI, *n. s.* On dead culms of *Sporobolus de pauperatus*, Sand Coulee, Cascade County, Mont., August, 1887. F. W. Anderson, No. 233.

Perithecia scattered, erumpent-superficial subhemispherical, nearly smooth, black, $\frac{1}{5}-\frac{1}{4}$ mm in diameter, with a short, thick, nipple-like ostiolum. Asci clavate-cylindrical $75-80$ by $16-18\mu$, with abundant paraphyses. Sporidia crowded-biseriate, overlapping each other, oblong-fusoid, ends subobtuse, straight, 6-septate, and not at all or finally slightly constricted at the septa, about 22 by 7μ , straight or nearly so. Differs from *L. culmifraga*, to which it is closely allied in its shorter and quite constantly only 6-septate sporidia, and from *L. culmicola* in its superficial growth.

DIDYMOSPHÆRIA EURYASCA, *n. s.* On dead leaves of *Pinus Murrayana*. Summit of Mt. Helena, Lewis and Clarke County, Mont. September, 1887. F. W. Anderson, No. 403. Perithecia scattered, suberumpent, minute 80–100 μ , perforated above. Asci inequilaterally ovate, sessile, 35–40 by 12–15 μ . Paraphyses? Sporidia bi triseriate ovate-oblong, 1-septate, constricted, rounded at the ends, brown, 12–15 by 3½–5 μ . The perithecia are only partially erumpent, remaining partly covered by the epidermis.

PUCCINIA MUTABILIS, *n. s.* II and III. On *Allium mutabile*, Sand Coulee, Mont., June, 1888. Anderson, No. 446. Sori suborbicular or elliptical, small, ½^{mm} in diameter, covered at first by the epidermis, soon exposed and chestnut-brown, sometimes more or less confluent. Uredospores, pale, faintly aculeolate, globose or elliptical 18–22 by 15 μ . Telentospores, ovate or elliptical obtuse and rounded, and moderately thickened above, distinctly constricted, narrowed below (in the ovate form) into the rather stout hyaline pedicel, which is a little shorter than or about as long as the spore. This differs from *P. alliorum*, Cda., *P. porri*, (Sow.) Winter, and *P. scillæ*, Linhart, in its shorter, obtuse spores.

SPORIDESMIUM MACROSPOROIDES, *n. s.* On stems of *Artemisia tridentata*. Glendale, Mont., October, 1888. F. W. Anderson, No. 391. Forming orbicular or subelongated disks 1–3^{mm} in diameter, at first covered by the white tomentose coating of the stem, then bare and black, appearing as a slightly elevated disk or flattened tubercle, the lower stratum of which is composed of the closely compacted hyphæ changed into a subgrumous mass and giving rise to a superficial layer of conidia which are at first oval or subglobose and subhyaline, but soon become dark and 1-septate or oftener sarcinuliform, *i. e.*, subglobose 8–12 μ in diameter, and divided into 4 cells by two septa at right angles to each other. These 4-celled conidia soon increase in size by the formation of additional cells till they finally simulate more or less perfectly the form of the conidia of *Macrosporium*, clavate or obovate with 3–4 transverse septa and one or more longitudinal septa forming an olive brown conidium 30–40 by 18–20 μ , without any distinct pedicel. Var. *gummosum*, on twigs of *Betula alnifolia* (Anderson, 294), is preceded by a gummy exudation in the form of a small transparent globule and has the conidia more irregular in shape.

SEPTOSPORIUM HETEROSPORUM, *n. s.* On living leaves of *Vitis Californica*, near Orange, Cal. Prof. F. L. Scribner, October, 1887. Spots scattered and more or less confluent, indefinitely limited, rusty brown above, ½ to 1 centimeter in diameter, smoky black below or appearing gray on account of the tomentum of the leaf.

Hyphæ hypophyllous, issuing in fascicles from the stomata of the leaf and bearing at their apices the very variable conidia, which are at first oblong-cylindrical, 2–3 septate, 20–40 by 5–7 μ , like the conidia of a *Cercospora*. These conidia soon become constricted at the septa and each of the three or four cells become uniseptate. The three primary septa

gradually become deeper until the conidia finally separate into three or four separate uniseptate segments of a short elliptical or nearly spherical shape, about 12μ in diameter, with the epispore distinctly roughened. We have compared this with specimens of *Septosporium Fuckelii*, Thüm., as represented in de Thümen's *Mycotheca Universalis*, 671, and with specimens collected in Algeria by Professor Viala. The California specimens differ in their much shorter hyphæ and very different conidia, which are much constricted at the septa. Plate X, Figs. 5 and 6.

NEW SPECIES OF HYPHOMYCETOUS FUNGI.

By J. B. ELLIS and BENJAMIN M. EVERHART.

OIDIUM PIRINUM, *n. s.* On leaves of *Pirus coronaria*, Racine, Wis., June, 1888. Dr. J. J. Davis, No. 31. Spots large, occupying a large part of the leaf, light brown, with definite, rather irregular outline, finally spreading over and killing the entire leaf. Conidia subglobose, with the surface slightly uneven, hyaline $12-16\mu$ in diameter, closely concatenate in series of 3-4, the lower one supported on a slender basidium $10-12\mu$ long. A portion of this basidium remains attached to the lower conidium as a short pedicel. The prostrate sterile hyphæ are either wanting or at least not conspicuous, the abundant pulverulent, light-cinereous conidia, which are mostly on the upper surface of the leaf, being the most conspicuous feature.

OVULARIA COMPACTA, *n. s.* On living leaves of *Macrorhynchus troximoides*. Wet mountain valley, Colorado, July, 1888. Demetrio, 182. Spots amphigenous, subelliptical, 1cm in diameter, light brown or buff. Hyphæ simple, continuous, $15-25$ by 4μ , slightly toothed above or entire, forming dense tufts and bearing at their tips the ovate $12-15$ by $5-6\mu$ conidia.

LANGLOISULA. A new genus of *Mucedineæ*.

Hyphæ prostrate, much branched and interwoven, forming a loose, submembranaceous layer, and bearing the large solitary conidia at their extremities. Differs from *Monosporium* in the absence of any erect fertile hyphæ and from *Monilia* in its solitary conidia.

LANGLOISULA SPINOSA, *n. s.* Growing around the base of the culms of *Andropogon muricatum* (in gardens). St. Martinville, La., January, 1889. Langlois, 1641.

Forms a thin, light-yellow layer like a *Corticium*, finally becoming of a deeper color (tawny-yellow) and subpulverulent, breaking up into frustules like *Corticium scutellare* B. & C., and falling off. The fungus is made up of prostrate yellow hyphæ $2-3\mu$ in diameter, repeatedly dichotomously branched, the ultimate branches short, subulate or spiniform, bearing the globose or oval yellow conidia $12-14\mu$ in diameter in a loose layer partially covering the subjacent hyphæ. The ultimate